

NDIIPP

Technical Architecture

Case Studies

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Goal

- Develop technical infrastructure to enable and facilitate collaborative preservation partnerships.

Complex Problem

- Coupling of two hard problems
 - Preservation and
 - Collaborative partnerships

Development Process

- Requirements gathering
- Design
- Implementation
- Test
- ...

Motivation

- There are different preservation partnership types.
- Each partnership type has its mode of operation and technical needs.
- Knowledge of partnership dynamics important to make architecture effective.
- Multiple architectures will (at least initially) be needed to serve different partnership types.

Methodology

- Identify different (viable, interesting) partnership scenarios.
- Within each scenario, identify/form case studies.
- Gather requirements for each case study.
- Develop/Capture architecture(s) for case studies.

Methodology

- Test effectiveness of developed/captured architectures.
- Generalize case study architecture(s) to scenario type level or higher.
- Content types across case studies/scenarios (uniform, varied?)

Partnership Roles

- Owner
- Producer
- Selector
- Collector
- Exhibitor
 - Selector
 - Organizer
- Preserver
 - Holder (storage)
 - Descriptor (meta-data)
 - Digital custodian
- User
- Technology provider

Scenarios

Sc\Role	Producer	Selector	Preserver	Exhibitor
Scenario 1	✓	✓	✓	✓
Scenario 2	✓		✓	
Scenario 3	✓	✓	✓	
Scenario 4		✓	✓	✓
Scenario 3		✓	✓	

Case Studies

(Role Distribution)

	Role 1	Role 2	Role 3	Role 4	Role 5
Partner 1	✓	✓			
Partner 2	✓		✓		
Partner 3		✓	✓	✓	
Partner 4					✓

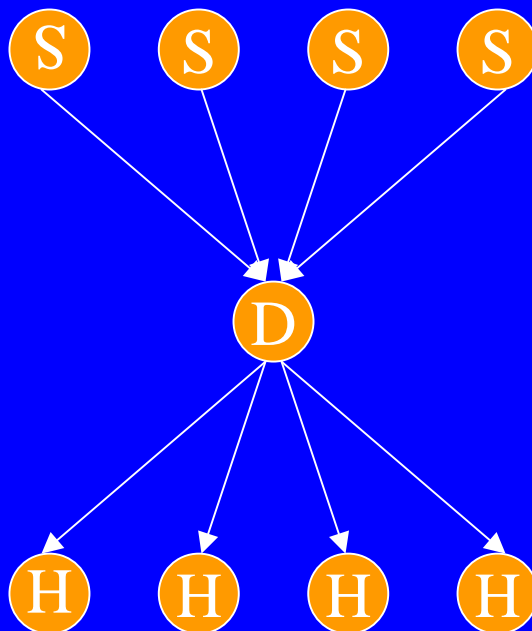
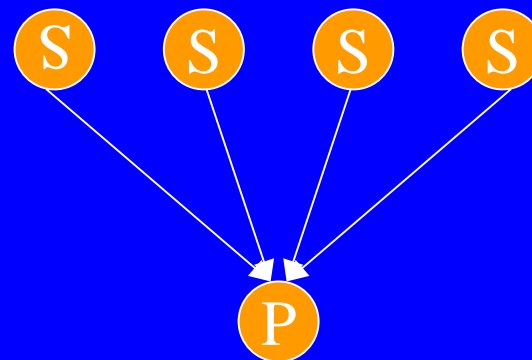
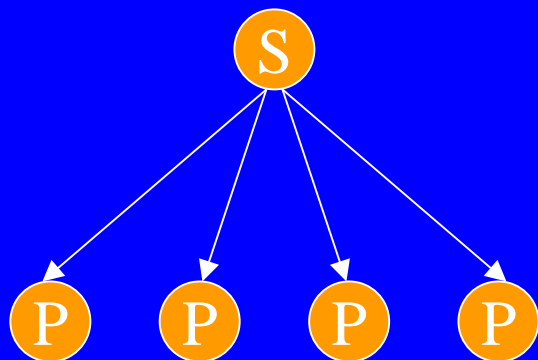
Case Studies

	Producer	Selector	Preserver
Partner 1	✓	✓	
Partner 2	✓	✓	
Partner 3	✓	✓	
Partner 4			✓

Case Studies

	Producer	Selector	Preserver
Partner 1	✓	✓	
Partner 2			✓
Partner 3			✓
Partner 4			✓

Examples



Risk Management

- Aim at minimizing risk of content loss over time
- Identify factors contributing to risk of loss
- Develop model that associates risk factors with preservation roles in scenarios and role distributions.
- Model informs how absence of a role (or distribution thereof) contributes to different risk factors.

Advantages

- Approach provides specific cases for which to develop architectures.
- We can identify, discover and analyze different partnership types.
- Opportunities for generalization can be exploited by analyzing different partnership type architectures.

Summary

- Create a portfolio of new or existing partnership types.
- Watch them at work (case studies)
- Capture and analyze their architectures if they exist.
- Develop or facilitate development if it (i.e. architecture) does not exist.